



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification: <b>G07F 17/32, A63F 3/08, G07C 15/00</b>	<b>A1</b>	(11) International Publication Number: <b>WO 00/77753</b>
		(43) International Publication Date: <b>21 December 2000 (21.12.2000)</b>
(21) International Application Number: <b>PCT/B00/00792</b>		
(22) International Filing Date: <b>14 June 2000 (14.06.2000)</b>		<b>Published</b>
(30) Priority Data: <b>99/3941 14 June 1999 (14.06.1999) ZA</b>		
(60) Parent Application or Grant <b>GOLDSTEIN, Ran [/]; O. WEINBREN, Gregory, Paul [/]; O. MEDALIE, Leslie [/]; O. GOLDSTEIN, Ran [/]; O. WEINBREN, Gregory, Paul [/]; O. MEDALIE, Leslie [/]; O. GILSON, David, Grant; O.</b>		

(54) Title: LOTTERY SYSTEM

(54) Titre: SYSTEME DE LOTERIE

## (57) Abstract

A method of operating a lottery comprises allocating individual lottery numbers to participants who are subscribers to a mobile telephone service. The lottery number can be derived from the MSISDN of the subscriber or other data. From time to time a winning lottery number is generated, and subscribers are required to contact a call centre to establish whether or not their number is the winning number. The revenue generated by the calls funds the lottery itself.

## (57) Abrégé

L'invention concerne un procédé de loterie consistant à attribuer des numéros de loterie à chacun des participants, en l'occurrence les abonnés d'un service de téléphonie mobile. Ce numéro peut être déduit du numéro RNIS de la station mobile de l'abonné ou de données autres. Périodiquement, un numéro de loterie gagnant est généré. Les abonnés doivent alors contacter un centre d'appels pour savoir si leur numéro correspond au numéro gagnant. Les recettes générées par les appels permettent de financer la loterie.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 December 2000 (21.12.2000)

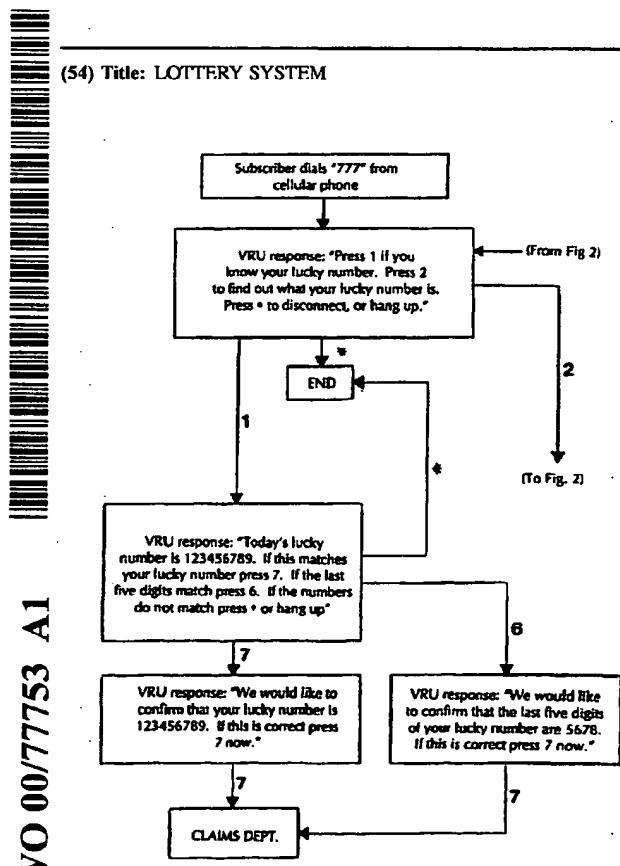
PCT

(10) International Publication Number  
**WO 00/77753 A1**

- (51) International Patent Classification<sup>7</sup>: G07F 17/32, A63F 3/08, G07C 15/00
- (21) International Application Number: PCT/IB00/00792
- (22) International Filing Date: 14 June 2000 (14.06.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
99/3941 14 June 1999 (14.06.1999) ZA
- (71) Applicant and  
(72) Inventor: GOLDSTEIN, Ran [ZA/ZA]; 26 Copley Avenue, Elton Hills, Athol, 2196 Sandton (ZA).
- (73) Inventors; and  
(75) Inventors/Applicants (*for US only*): WEINBREN,
- Gregory, Paul [ZA/ZA]; 7 Atholbank, Froome Road, Athol Gardens, 2196 Sandton (ZA). MEDALIE, Leslie [ZA/ZA]; 83 11th Avenue, Sydenham, 2192 Johannesburg (ZA).
- (74) Agents: GILSON, David, Grant et al.; Spoor and Fisher, Rochester Place 173 Rivonia Road, Morningside Sandton, P.O. Box 41312, 2024 Craighall (ZA).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: LOTTERY SYSTEM



(57) Abstract: A method of operating a lottery comprises allocating individual lottery numbers to participants who are subscribers to a mobile telephone service. The lottery number can be derived from the MSISDN of the subscriber or other data. From time to time a winning lottery number is generated, and subscribers are required to contact a call centre to establish whether or not their number is the winning number. The revenue generated by the calls funds the lottery itself.

WO 00/77753 A1

WO 00/77753 A1



patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

**Description**

**5**

**10**

**15**

**20**

**25**

**30**

**35**

**40**

**45**

**50**

**55**

5

10

15

**LOTTERY SYSTEM**

20

25

30

**BACKGROUND OF THE INVENTION**

35

THIS invention relates to a method of operating a lottery.

Many lottery schemes exist. Some are run purely as a gambling operation, while others have a charitable aspect.

40

Most lotteries require a participant to purchase a lottery ticket, which is inconvenient and which tends to limit the number of participants.

45

It is an object of the invention to provide an alternative method of operating a lottery.

50

**CONFIRMATION COPY**

5

-2-

SUMMARY OF THE INVENTION

10

According to the invention there is provided a method of operating a lottery, the method comprising:

15

defining a group of potential lottery participants corresponding to a group of subscribers to a mobile telephone service;

20

allocating a lottery number to each participant, the lottery number being related to existing telephone service data of the participant;

25

generating a winning lottery number;

comparing the winning lottery number with the lottery numbers of participants; and

30

allocating a prize to a participant whose lottery number matches the winning lottery number.

35

The method may include the step of participants contacting the lottery operator to be advised of their lottery numbers.

40

Preferably, the participants are required to contact the lottery operator on a designated number of the mobile telephone service.

45

The step of comparing the winning lottery number with the lottery number of participants may be carried out by requiring the participants to contact the lottery operator to supply their lottery number and/or to be advised of the winning lottery number.

50

55

5

-3-

10

The method may further include the step of requiring a participant whose lottery number corresponds to the winning lottery number to contact the lottery operator to claim a prize.

15

In either case the participants may be required to contact the lottery operator on a designated number of the mobile telephone service.

20

Preferably, the participants contact the lottery operator by making calls to a voice responsive unit at a call centre.

25

Alternatively, the participants may contact the lottery operator by sending short messages to a data centre using a short message service of the mobile telephone service.

30

Preferably, the lottery number allocated to each participant is derived from the Mobile Subscriber Integrated Service Digital Number (MSISDN) of the participant.

35

**Figures 1 & 2** are simplified flowcharts illustrating the process by which a subscriber obtains his/her lottery number and a winning lottery number from a VRU based call centre, according to the method of the invention;

40

**Figure 3** is a simplified flowchart showing how a subscriber obtains his/her lottery number using a short message service of the telephone service operator; and

45

50

55

5

-4-

10

**Figure 4** is a simplified flowchart showing the procedure utilised by a subscriber to obtain the winning lottery number utilising the short message service.

15

#### **DESCRIPTION OF AN EMBODIMENT**

20

The present invention aims to provide a method of operating a lottery in which the participants in the lottery are essentially predetermined by their being subscribers to a mobile telephone service (in most cases, a cellular telephone service). Instead of providing for individuals to enter the lottery on a random, voluntary basis, the invention enters each subscriber in a lottery automatically from time to time, so that it is only necessary for the subscribers to enquire from the lottery operator as to whether or not they have won.

25

Many mobile telephone networks make use of the GSM digital cellular system. Each network subscriber has a Mobile Subscriber Integrated Service Digital Number (MSISDN). This is the directory number dialed to reach a subscriber, and is unique to that subscriber. The number includes a country code and the national designation code, which identifies the subscriber's operator. The remaining digits comprise the subscriber's number which identify the subscriber's Home Location Register (HLR) within the home Public Land Mobile Network (PLMN).

30

35

40

Since each subscriber's MSISDN is unique, either the number itself or, preferably, a number or code derived from the number can be utilised to determine a unique "lucky number" or lottery number for each subscriber. Obviously, another number, code or other data which is unique to each subscriber (for example, an account number) could be used for deriving a lottery number.

45

50

55

5

-5-

10

Subscribers can generally be classified into pre-paid and contract (or post-paid) subscribers. Subscribers in the former group generally purchase "air time" in the form of pre-paid SIM cards which are "loaded" with a predetermined credit which is decremented as the user makes calls. Contract or post-paid subscribers are usually those whose credit-worthiness has been assessed as being sufficiently good for them to be invoiced monthly in arrears for calls made. Within this latter group, sub-groups may be identified, for example: subscribers to various subscription packages offered by network operators; corporate users, and so on. It will be appreciated that the lottery of the invention can be made applicable to all active subscribers, or any combination of groups and sub-groups. The latter possibility may be useful; for example, in conducting promotions of certain packages or services of a network operator.

20

25

An SQL database is utilised to store the MSISDN's of the selected subscribers, and a suitable algorithm is then applied to each number to generate lottery numbers from each MSISDN.

30

35

The lottery number or code for each subscriber can be determined in various ways. The lottery number can be generated once for each subscriber, or new numbers can be generated from time to time if required. Set out below is an example of a method of generating lottery numbers for each subscriber:

40

The MSISDN is usually an 11 digit number, for example:

+ 27 82 711 9321	-	South Africa
+ 61 41 620 2440	-	Australia
+ 31 20 638 3519	-	Netherlands
+ 85 22 897 0179	-	Hong Kong

45

50

55

5

-6-

10

The first two digits are the country code. The next few digits are the area code and/or the Home Location Register (HLR). The last five digits are the unique subscriber number.

15

The "lucky number" or lottery number is nine digits in length. The first two digits (ie. the country code) are dropped. The third digit will be multiplied by nine and only the second digit of the solution is used.

20

0	=	0
1	=	9
2	=	8
3	=	7
4	=	6
5	=	5
6	=	4
7	=	3
8	=	2
9	=	1

25

30

The fourth digit is multiplied by three and only the second digit of the solution is used.

35

0	=	0
1	=	3
2	=	6
3	=	9
4	=	2
5	=	5
6	=	8
7	=	1
8	=	4
9	=	7

40

45

50

55

5

-7-

10

The fifth digit is the relevant number plus two, with only the second digit of the solution being used.

15

0	=	2
1	=	3
2	=	4
3	=	5
4	=	6
5	=	7
6	=	8
7	=	9
8	=	0
9	=	1

20

25

The sixth digit is the relevant number less one.

30

0	=	9
1	=	0
2	=	1
3	=	2
4	=	3
5	=	4
6	=	5
7	=	6
8	=	7
9	=	8

40

45

The seventh digit is multiplied by seven and only the second digit of the solution is used.

50

55

5

-8-

10

0	=	0
1	=	7
2	=	4
3	=	1
4	=	8
5	=	5
6	=	2
7	=	9
8	=	6
9	=	3

15

The eighth digit is the relevant number less three and only the second digit of the solution is used.

20

0	=	7
1	=	8
2	=	9
3	=	0
4	=	1
5	=	2
6	=	3
7	=	4
8	=	5
9	=	6

30

40

The ninth digit is the relevant number plus three and only the second digit of the solution is used.

45

0	=	3
1	=	4
2	=	5
3	=	6

50

55

5

-9-

10

4	=	7
5	=	8
6	=	9
7	=	0
8	=	1
9	=	2

15

20

The tenth digit is the relevant number plus four and only the second digit of the solution is used.

25

30

35

0	=	4
1	=	5
2	=	6
3	=	7
4	=	8
5	=	9
6	=	0
7	=	1
8	=	2
9	=	3

The eleventh digit is left unchanged.

40

**EXAMPLES:**

	MSISDN	LOTTERY NUMBER
	27827119321	269076661
	61416202440	638109780
45	31206383519	808260859
	85228970179	860897419

50

55

5

-10-

10

It will be appreciated that the above example is merely one of many possible ways of generating a lottery number from the customer's MSISDN.

15

In the prototype method of the invention, no charge is made for the issuing of a lottery number, and each subscriber is automatically a participant in the lottery. However, it will be appreciated that this aspect of the method can be varied, so that a charge can be levied for entry into the lottery, either on a voluntary basis, or on the basis of a regular debit to the subscriber's account. Conveniently, the telephone service operator can inform subscribers of their lottery numbers in their monthly accounts. Alternatively, or in addition, a subscriber can dial a call centre to be advised of his/her lottery number. The call centre can be staffed by human operators, but will be more cost effective if it utilises a Voice Responsive Unit (VRU) to interact with callers. The flowcharts of Figures 1 and 2 illustrate the process followed by a subscriber to obtain his/her lottery number from a call centre utilising a VRU.

20

25

As an alternative, the Short Message Service (SMS) of the telephone service operator can be utilised by subscribers to transmit a request to a message or data centre for their individual lottery number, the lottery number then being transmitted back to the subscriber as a short message. The flowchart of Figure 3 illustrates this process graphically.

30

35

From time to time, typically on a daily, weekly or monthly basis, a computer will generate a winning lottery number on a pseudo random basis or another acceptable basis. The subscriber whose lottery number corresponds to the winning lottery number is not automatically advised of this fact, but it is left to subscribers to check whether or not they have won. In order to do this, they must contact a call centre/message centre in much the same manner as described above in order to identify themselves and to be advised of whether or not they have won. The relevant voice and message based procedures are illustrated in the flowcharts of Figures 1 and 4.

40

45

50

55

5

-11-

10

By way of example, the following procedure can be utilised in the case of calls to a call centre:

15

A special number is allocated (eg. 777) which the subscriber dials to reach the call centre. The consumer is prompted to press a designated key if he/she knows his/her lottery number, in which case a computer generated voice message is generated, which reads out the winning number. If the number matches the subscriber's lottery number, he/she presses another designated key to be transferred to a claims department agent who obtains further details of the subscriber in order to verify them, and provides the subscriber with a claim number. The subscriber then has a limited period of time (say, two days) to go to a designated claims office with identification, his/her subscriber identity module (SIM) card, and/or other suitable identifying means, in order to claim the prize.

30

It will be appreciated that the requirement that subscribers must make a call to obtain the winning lottery number, which will in most cases be a standard rate cellular call made from the subscriber's mobile handset, will generate a substantial amount of revenue which can be utilised to fund the lottery prizes.

35

The prospect of winning the lottery will tend to enhance subscriber loyalty to the telephone service operator. If subscribers are required to make a call to be advised of their lottery number, this revenue will be increased.

40

In a variation of the method, designed to deal with the possibility of the winning lottery number being published and thus circumventing the need for individual subscribers to contact the lottery operator to find out whether or not they have won, the subscribers contacting the call centre can be asked for their lottery number as described above, and are then told whether or not their number is a winning number, without being given the winning number itself. In

50

55

5

-12-

10

due course, the winning number can be published for purposes of transparency.

15

Numerous variations of the above described method are possible. However, the essence of the invention is the fact that a group of telephone service subscribers are automatically entered in a lottery or draw, and are required to make a call to enquire as to the result of the draw, thereby generating the necessary revenue to fund the prizes awarded.

20

25

30

35

40

45

50

55

**Claims**

**5**

**10**

**15**

**20**

**25**

**30**

**35**

**40**

**45**

**50**

**55**

5

-13-

10

**CLAIMS:**

15

1. A method of operating a lottery, the method comprising:

defining a group of potential lottery participants corresponding to  
a group of subscribers to a mobile telephone service;

20

allocating a lottery number to each participant, the lottery  
number being related to existing telephone service data of the  
participant;

25

generating a winning lottery number;

30

comparing the winning lottery number with the lottery numbers  
of participants; and

35

allocating a prize to a participant whose lottery number matches  
the winning lottery number.

2. A method accordingly to claim 1 including the step of participants  
contacting the lottery operator to be advised of their lottery numbers.

40

3. A method according to claim 2 wherein the participants are required to  
contact the lottery operator on a designated number of the mobile  
telephone service.

45

4. A method according to any one of claims 1 to 3 wherein the step of  
comparing the winning lottery number with the lottery number of  
participants is carried out by requiring the participants to contact the  
lottery operator to supply their lottery number and/or to be advised of  
the winning lottery number.

50

55

5

-14-

10

5. A method according to any one of claims 1 to 4 including the step of requiring a participant whose lottery number corresponds to the winning lottery number to contact the lottery operator to claim a prize.

15

6. A method according to claim 4 or claim 5 wherein the participants are required to contact the lottery operator on a designated number of the mobile telephone service.

20

7. A method according to any one of claims 4 to 6 wherein the participants contact the lottery operator by making calls to a voice responsive unit at a call centre.

25

8. A method according to any one of claims 4 to 6 wherein the participants contact the lottery operator by sending short messages to a data centre using a short message service of the mobile telephone service.

30

9. A method according to any one of claims 1 to 8 wherein the lottery number allocated to each participant is derived from the Mobile Subscriber Integrated Service Digital Number (MSISDN) of the participant.

35

40

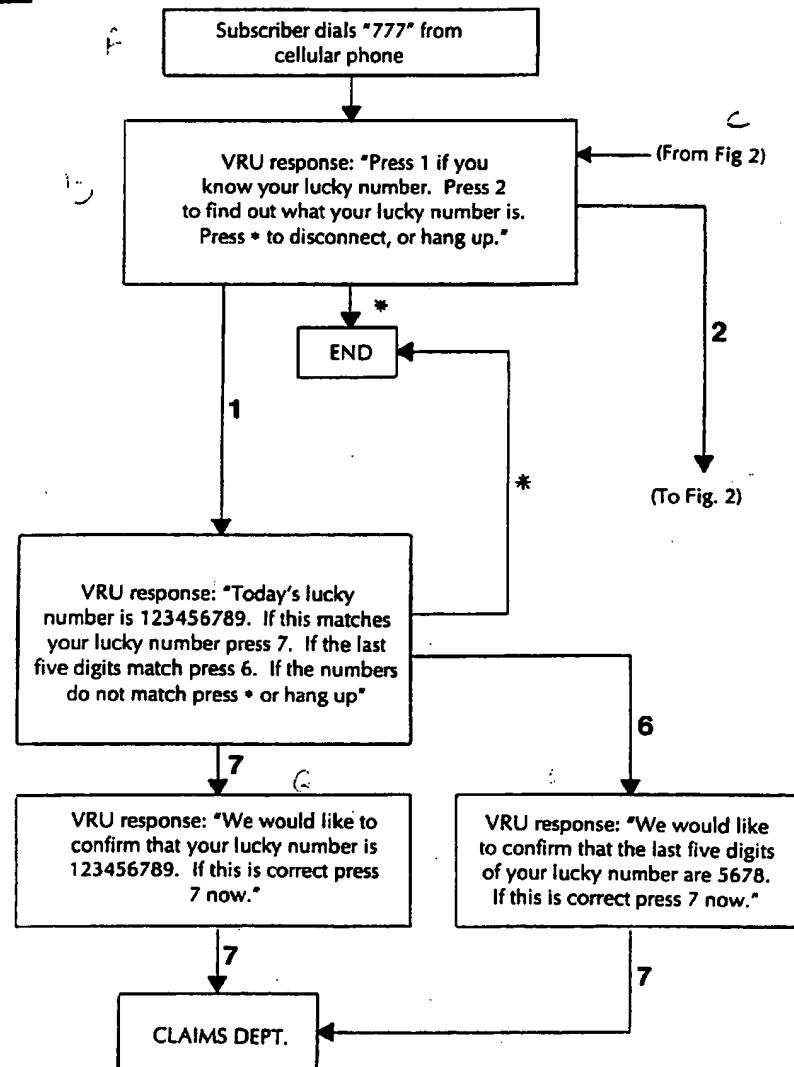
45

50

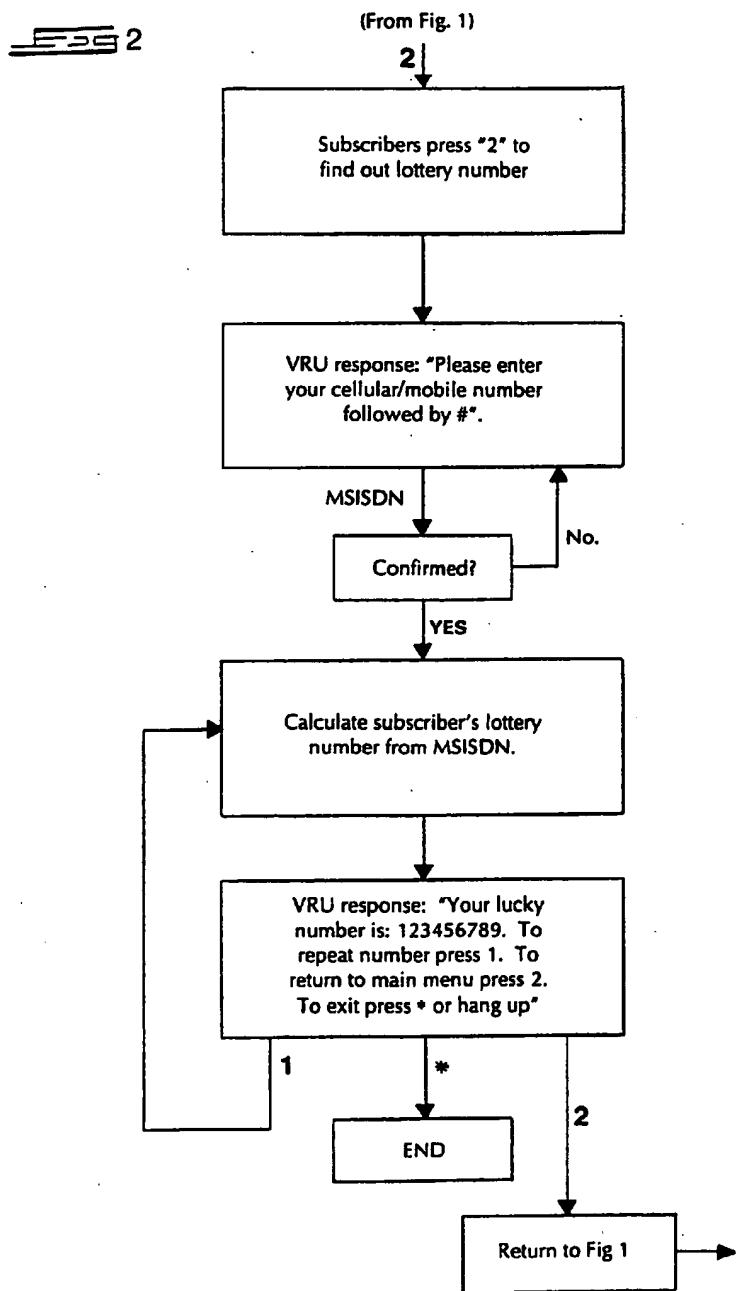
55

1  
4

~~FIG 1~~

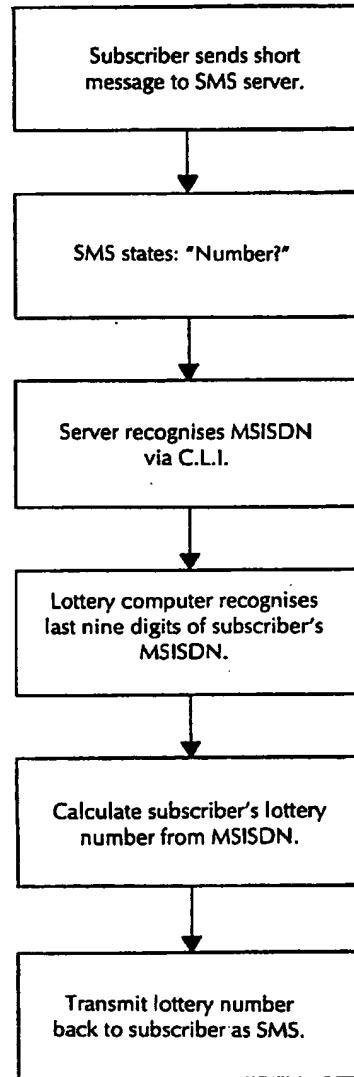


2  
4



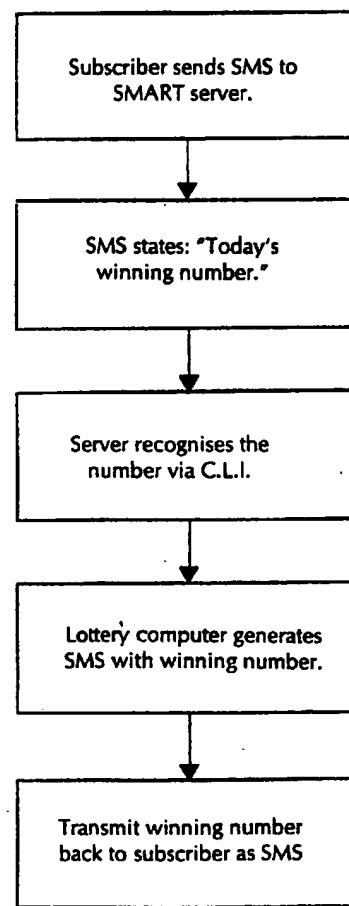
3  
3/4

~~FIG~~ 3



4  
4

~~FIGS~~ 4



**INTERNATIONAL SEARCH REPORT**

International Application No PCT/IB 00/00792
---

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 G07F17/32 A63F3/08 G07C15/00		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 G07C G07F G06F A63F		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 198 33 218 A (SCHNEIDER MANNS AU LUCAS) 11 February 1999 (1999-02-11) abstract; claims; figures -----	1-3
A	US 5 519 771 A (IIJIMA MASAMI) 21 May 1996 (1996-05-21) abstract; claims; figures column 1, line 14 -column 2, line 55 -----	1,2
A	US 4 996 705 A (POSTERICK BARRY L ET AL) 26 February 1991 (1991-02-26) abstract; claims; figures -----	1
A	DE 195 02 613 A (EIBA PETER) 1 August 1996 (1996-08-01) abstract; claims; figures ----- -/-	1
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
<p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"S" document member of the same patent family</p>		
Date of the actual completion of the international search  4 October 2000	Date of mailing of the international search report  11/10/2000	
Name and mailing address of the ISA  European Patent Office, P.B. 5018 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer  Meyl, D	

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 00/00792

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 922 522 A (SCANLON JOHN M) 1 May 1990 (1990-05-01) -----	
A	WO 97 31339 A (SARDI MARCO ;DALLA ZORZA CSABA (IT)) 28 August 1997 (1997-08-28) -----	
A	US 4 969 183 A (REESE MORRIS) 6 November 1990 (1990-11-06) -----	

1

Form PCT/ISA/210 (continuation of second sheet) (July 1992)

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No  
PCT/IB 00/00792

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
DE 19833218	A	11-02-1999		NONE		
US 5519771	A	21-05-1996	JP	6085922 A		25-03-1994
US 4996705	A	26-02-1991	AU	1229788 A		31-03-1989
			WO	8902139 A		09-03-1989
			US	5403999 A		04-04-1995
DE 19502613	A	01-08-1996	AT	184721 T		15-10-1999
			AU	4664296 A		14-08-1996
			BR	9606847 A		25-11-1997
			CA	2211297 A		01-08-1996
			CN	1174620 A		25-02-1998
			CZ	9702296 A		17-12-1997
			DE	59603068 D		21-10-1999
			WO	9623289 A		01-08-1996
			EP	0806024 A		12-11-1997
			FI	973046 A		19-09-1997
			HU	9800695 A		28-07-1998
			JP	10512984 T		08-12-1998
			NO	973355 A		05-09-1997
			PL	321544 A		08-12-1997
			SK	101397 A		04-02-1998
			US	6117013 A		12-09-2000
US 4922522	A	01-05-1990		NONE		
WO 9731339	A	28-08-1997	IT	MI960327 A		21-08-1997
			EP	0883865 A		16-12-1998
US 4969183	A	06-11-1990		NONE		